

REMARKS

This amendment is submitted in response to the Office action mailed on August 13, 2004. The Office Action rejects Claims 1-6, 9-17, 19 and 20 under 35 U.S.C. §103(a). In addition, Claims 7, 8 and 18 were rejected under 35 U.S.C. §103(a) and Claims 1-20 under the judicially-created doctrine of obviousness-type double patenting. In response Claims 1, 13 and 19 have been amended. These amendments do not add new matter. A Terminal Disclaimer accompanies this response. Applicants respectfully submit that in view of the amendments to the claims and for the reasons set forth below, that the rejections either have been overcome or are improper for the following reasons.

Claims 1-6, 9-17, 19 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over European Patent No. 0,273,809 to Naumann (*Naumann*) in view of U.S. Patent 5,110,607 to Yang (*Yang*) or U.S. Patent 4,379,169 to Reggio et al. (*Reggio*). Applicants respectfully disagree with and traverse these rejections for the reasons set forth below.

Of the pending claims at issue, Claims 1, 13 and 19 are the amended independent claims. Claims 2-6 and 9-12 depend from amended independent Claim 1, Claims 14-17 depend from amended independent Claim 13 and Claim 20 depends from amended independent Claim 19.

Independent Claims 1, 13 and 19 each claim a process for making chewing gum. Amended Claim 1 discloses a process for making chewing gum that uses a mixing apparatus to perform all the addition and compounding steps necessary to produce a gum base. All of the components or ingredients that are necessary to make a chewing gum base are then added to the mixing apparatus. Specifically, an elastomer that is not preblended or pretreated is added to the mixing apparatus. Once the gum base is mixed, other ingredients are added to the gum base to produce chewing gum. Thus, the process disclosed in Claim 1 uses a single mixing apparatus to continuously mix all of the ingredients to produce a chewing gum base, where the elastomer is not preblended or pretreated.

Amended Claim 13 discloses a process for producing chewing gum using a single extruder. The extruder performs all the necessary addition to produce the chewing gum base. All of the components necessary to make a chewing gum base are added into the extruder. Specifically, an elastomer that is not preblended or pretreated is added to the extruder. Once the chewing gum base is produced in the extruder, other ingredients are added to the completed gum

base to make the chewing gum. Therefore, Claim 13 claims a process for producing chewing gum base and chewing gum in a single apparatus, where the elastomer is not preblended or pretreated.

Amended Claim 19 is directed to a process for making chewing gum in a continuous chewing gum production line. A single extruder is used to perform all the addition and compounding steps necessary to make the gum base. All of the components are mixed together in the extruder to produce the gum base including an elastomer, which is not preblended or pretreated. After the gum base is produced, the gum base is added to water soluble ingredients and mixed to produce chewing gum.

An element disclosed in each of the independent claims is that the chewing gum base is produced using an elastomer that is not preblended or pretreated. The cited art requires preblending or pretreating an elastomer before the ingredients are mixed to produce the gum base.

With respect to the obviousness rejection to Claims 1-6, 9-17, 19 and 20, Applicants respectfully submit that the currently amended claims overcome the combination of *Naumann* in view of *Yang* or *Reggio*. The primary reference *Naumann* teaches away from the claimed invention. *Naumann* teaches a chewing gum base and a chewing gum where an elastomer and filler are *preblended* to form a premix. (*Naumann*, page 3, lines 21-23). Once the elastomer and filler are mixed, the contents of the mixing apparatus are discharged from the apparatus and form a non-adhesive pre-mix. (*Naumann*, page 4, lines 2-3). The pre-mix is divided into fragments where a portion of the fragments of the pre-mix and at least one other component or ingredient for making the chewing gum base are introduced into a powder mixer and subsequently mixed. (*Naumann*, page 4, lines 4-7). Thus, *Naumann* teaches that an elastomer is *preblended* with the filler prior to the addition with the other ingredients necessary to form a gum base. Accordingly, *Naumann* does not teach, or even suggest, a gum base where the elastomer is not preblended or pretreated prior to the addition of the ingredients to form the gum base.

The remaining references do not remedy the deficiencies of *Naumann*. In fact, the references likewise teach and suggest that an elastomer is pretreated or preblended prior to the addition with all the ingredients to form the gum base. Applicants submit that even if the

combination were proper, *Yang* and *Reggio* would not contain all of the claim limitations of the present claims.

For example, *Yang* teaches that the elastomer is preblended or pretreated prior to the addition of the mixing apparatus. *Yang* discloses that the “elastomer is *first treated* to be opened up sufficiently . . . [T]he elastomer [is] heated to a temperature for opening up the intermolecular structure under conditions of *low shear mixing* . . .” (emphasis added, *Yang*, col. 5, lines 46-52). *Yang* further discloses that “[t]he compatibilizing wax should be added . . . *after the elastomer has been reduced to a fine particulate consistency*, such as a sandy consistency.” (emphasis added, *Yang*, col. 5, lines 58-61). Thus, *Yang* teaches an elastomer is first *pretreated* by blending until the elastomer has been reduced to a fine particulate consistency under conditions of low shear mixing and heat prior to the addition of the other ingredients. Accordingly, it would not be obvious to add the elastomer separately to the mixing apparatus in the process of *Naumann* because *Yang* does not teach or suggest a way to add elastomer without first pretreating it before adding it to the mixing apparatus. Therefore, combining *Naumann* and *Yang* fails suggest or disclose that the elastomer is not preblended or pretreated prior to the addition to the mixing apparatus, and thus, fail to render the claimed subject matter obvious for at least these reasons.

Further, Applicants do not believe that *Reggio* remedies the deficiencies of *Naumann*. *Reggio* is merely cited for being able to separately add elastomer to the mixing apparatus without forming a premix with a filler. (See, Office Action, page 2). However, *Reggio* discloses that “[t]he elastomer and ester gums were *mixed until homogeneous*. *Thereafter*, the *waxes were added* with mixing *followed by the remaining ingredients*.” (emphasis added, *Reggio*, col. 4, lines 64-67). Thus, *Reggio* teaches an elastomer is *preblended* with the ester gums prior to the addition and mixing with the other ingredients necessary to form a gum base. Therefore, combining *Naumann* and *Reggio* fail to teach, suggest, or disclose that the elastomer is not preblended or pretreated prior to the addition to the mixing apparatus, and thus, fail to render the claimed subject matter obvious for at least these reasons.

Accordingly, for at least these reasons, Applicants respectfully request that the obviousness rejection be reconsidered and the rejection be withdrawn.

Claims 7, 8 and 18 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Naumann* in view of *Yang* or *Reggio* as applied to Claims 1-6, 9-17, 19 and 20 above, and further in view of *Boudy*. Applicants respectfully disagree with and traverse these rejections for the reasons set forth below.

Of the pending claims at issue, Claims 1, 13 and 19 are the independent claims, and are discussed above. Claims 7-8 depend from amended independent Claim 1 and Claim 18 depends from amended independent Claim 13.

The cited art fails to disclose or suggest that the elastomer is not preblended or pretreated prior to the addition to the mixing apparatus, based on at least the reasons discussed above and incorporated herein by reference. In addition, Applicants do not believe that *Boudy* remedies the deficiencies noted above.

Boudy is directed to a process for preparing a gum base concentrate or gum base pre-mix and not for producing the gum base itself. (*Boudy* page 1, lines 3-4). This process produces the pre-mix by *grounding a high molecular elastomer into particles* in an impact disk mill 1. (*Boudy*, figure 1, page 4, lines 20-22). Thus, *Boudy* discloses that it *pretreats* the elastomer before it is added to the other necessary ingredients to produce the gum base concentrate or gum base pre-mix. The ground elastomer is then mixed with plasticizers, then combined with mineral fillers. All these ingredients are then introduced into a twin screw extruder which forms the final pre-mix product. (*Boudy*, pages 4-5, lines 22-24, 1-2) Hence, *Boudy* further discloses that the elastomer is *preblended* prior to its addition with the remaining ingredients form the gum base concentrate or gum base pre-mix. Thus, *Boudy* discloses a gum base concentrate or gum base pre-mix where the elastomer is preblended and pretreated prior to its addition with the remaining ingredients.

Based on the teachings of *Naumann* in view of *Yang* or *Reggio*, and *Boudy*, Applicants do not believe this combination teaches, suggests, or even discloses that the elastomer is not preblended or pretreated prior to the addition to the mixing apparatus, and thus, fails to render the claimed subject matter obvious for at least these reasons. In fact each of these references teach that an elastomer is preblended or pretreated prior the addition of all the ingredients necessary to make a gum base.

Accordingly, for at least these reasons, Applicants respectfully request that the obviousness rejection be reconsidered and the rejection be withdrawn.

The Office Action rejects Claims 1-20 under the judicially-created doctrine of obviousness-type double patenting in view of Claims 1-20 of U.S. Patent No. 5,562,936 to Song et al.; Claims 1-36 of U.S. Patent No. 5,543,160 to Song et al.; or Claims 1-21 of U.S. Patent No. 6,238,710 to Song et al. In response, Applicants are filing herewith a Terminal Disclaimer. Accordingly, this rejection has been overcome. Accordingly, these rejections have been overcome.

For the foregoing reasons, Applicants respectfully request reconsideration of their patent application and earnestly solicit an early allowance of same.

Respectfully submitted,

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Dated: November 15, 2004